APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,056	12/31/2001	Amnon Silverstein	10010658	1798

7590   12/13/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER
RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16- 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per specification provided "spatial region" as claimed does not appear therein and the disclosure only recites "spatial resolution" which examiner views as being different to cited limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16- 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szelliski et al US Patent 6,009,190, hereinafter, Szeliski in view of Tice (US Patent 6,317,158).

As per claims 16 and 21 Szeliski teaches accessing said image (see for example column 19 lines 13- 15 for localizing results to sub- pixel precision corresponding to sub- pixels of an image), said image sampled at a higher spatial resolution than the spatial resolution of said display see for example figures 2- 7 column 13 lines 27- 31; based on intensity of said first color in said region of said image(the pseudocolor associated with each pixel inside), calculating an intensity value (matching the face color id tag of the triangle) for said first color to be displayed in said sub- pixel of said display, wherein said region comprises an intensity value for each of said plurality of colors see for example column 29 lines 54- 67 and column 20 lines 20- 43 wherein average color corresponding to a pixel location in a triangle along with color or intensity is used; and rendering said image on said display, based on said calculated intensities see for example column 27 lines 62- 67 and column 28 lines 1- 8 and column 32 lines 5- 9.

However, Szeliski does not teach mapping a plurality sub- pixels of said display to corresponding spatial regions of said image, wherein each sub- pixel of said display is

mapped to a unique spatial region of said image.

Tice teaches mapping a plurality of sub- pixels (see for example column 5 lines 19- 22 and fig. 4) of said display to corresponding spatial regions of said image, wherein each sub- pixel of said display is mapped to a unique spatial region of said image see for example column 5 lines 10- 18 and fig. 4 wherein spatial mapping is defined by the effect definition.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Tice into Szeliski to have subpixel position adjusted in association with spatial mapping and therefore avoid the undesirable artifacts that occur in detail areas that appear and disappear over time and thus improve the quality output being displayed see for example column 1 35- 40 through column 2 lines 1- 15 and 51- 65.

As per claim 17 Szeliski teaches averaging the intensity value of said first color over a plurality of regions neighboring said spatial region of said image, wherein each of said areas maps to its own plurality of spatial regions see for example column 30 lines 20- 21.

As per claim 18 Szeliski teaches based on the intensity of said first color in said spatial region of said image, calculating an uncompensated intensity value for said first color(computation of intensity through triangles with id tags) see for example column 29 lines 57- 67 and figure 31; and calculating an error for each of the rest of said plurality of colors within said region see for example column 11 lines 44- 56; and storing said errors (registration of errors) for said rest of said colors for processing further regions of said

image see for example column 32 lines 43- 45; and calculating a compensated intensity value for said spatial region (compensation through de- ghosting; a method for improving quality of image mosaics see for example column 32 line 37), based on said uncompensated intensity value and errors which were calculated for said first color when processing other image regions see for example column 32 lines 54- 58.

As per claim 19 Szeliski teaches calculating said errors for said spatial region (see for example column 11 lines 44- 56) when processing a spatial region for which uncompensated values are calculated for other colors of said plurality see for example column 29 lines 57- 67 and figure 31.

As per claim 20 Szeliski teaches filtering said image prior to calculating the intensity value of said sub- pixel, thereby producing an image with the same color scheme as said display see for example column 29 lines 18- 20.

As per claim 22 Szeliski teaches based on the intensity of said first color in said plurality of spatial regions of said image, calculating an intensity value for said first color see for example column 29 lines 54- 67; and calculating an error for said first color see for example column 11 lines 44- 56; and propagating said error for said first color for processing further spatial regions of said image see for example column 32 lines 40- 42.

As per claim 23 Szeliski teaches using in the intensity value calculating an error that was propagated when processing another sub- pixel for said first color see for example column 12 lines 48- 50.

Response to Arguments

Applicant's arguments filed 11/14/2005 have been fully considered but they are not persuasive.

As per applicant's remarks on page 3, applicant argues "Szeliski teaches a way of constructing a texture map from a set of overlapping images using among other things pixel locations of the image".

Examiner respectfully disagrees.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Examiner notices the teachings of the prior art (Szeliski et al) used for rejection purposes as pointed out by applicant; however, examiner fails to observe how, what and where the differences and or the contradictions fall.

As per applicant's remarks on page 3, applicant argues "Szeliski makes no mention of sub- pixels".

In response examiner points out to for example column 19 lines 13- 23 for localizing results to sub- pixel precision corresponding to sub- pixels of an image.

As per applicant's remarks on page 4, applicant argues "Szeliski does not teach said image sampled at higher special resolution".

Examiner respectfully disagrees.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Examiner does not observe said limitations as being claimed and believes that may be a typing error.

Applicant again makes general allegation (pages 4- 5) that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant further makes a reference of the secondary reference made of the record (Tice) which recites "Tice fails to remedy the deficiency in Szeliski".

Examiner respectfully disagrees.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mike Rahmjoo whose telephone number is (571) 272-

7789. The examiner can normally be reached on 6:30- 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew Bella can be reached on (571) 272- 7778. The fax phone number

for the organization where this application or proceeding is assigned is (571) 273- 8300

for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

4750.

Mike Rahmjoo

November 29, 2005

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600